Development of an Intelligent Support Tool for Software Certification Process based on Product Quality Approach

Siti Zahidah Abdullah
Department of Management Information System,
Faculty of Technology and Information Science,
University Kebangsaan Malaysia,
43600 Bangi, Malaysia
Email: sza42@yahoo.com

Abstract

Software certification have been a concern amongst the software engineering community for the past few decades and they remain a major focus today as a way of introducing and standardizing engineering methods into the software industry. There are more researches working on software certification but there is none establish mechanism in intelligent aspect. Artificial Intelligence techniques could be used to either enhance the applications presented or solve other problems arising in software certification process. This deficiency calls for a new generation of certification processes. I particularly interested in the combination of software certification with artificial intelligent element in expert system. Therefore, in this report, I propose an intelligent support tools in software certification process from previous ones. This project presented in this report has been carried out as a part of Software Certification Model Based on Product Quality Approach (SCfM model). This report presents a methodology for certifying software systems that will be employed in environments with utilize the application of the artificial intelligent or knowledge based element.

1. Introduction

Software is playing an important, and often vital, role in almost all sectors of an economy increasingly. As a consequence, the production of high quality software has become a critical factor in the competitiveness of all sectors of industry. The ultimate goal of certification is to assess the quality of a software product and to create the warranty defining levels of quality that the user can expect of that product.
In most of the cases, the ultimate goal of the certification is to assess the quality of the software product. Software product certification is about identifying important characteristics and assuring their conformance with requirements and specifications. There are certain attributes of a software program that are of interest. The ISO/IEC 9126 standard defines some attributes that can be considered as basis for the certification of a software product such as reliability, maintainability, usability, efficiency etc.
In this paper, it will be focus on the issues related to software certification based on product quality approach. I am particularly interested in the combination of software certification with artificial intelligent element in expert system. Here, my focus is on the related questions of how the software product certification model can help the users to generate the result based on an artificial intelligent system or knowledge base system.

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1.1. Background

Background.....

1.2. Literature Review

1.2.1. SCfM Prod: The Model.

1.2.2. LaQuSo Software Product Certification Model (LSPCM).

1.2.3. Meta Model for Software Certification.

2. Conclusion

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